

# Mineral Industry Surveys

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## SULFUR IN MARCH 2005

During the month, production of recovered elemental sulfur was 741,000 metric tons, according to the U.S. Geological Survey. March production was 8% higher than that of February 2005 and 5% lower than that of March 2004. Shipments were 9% higher than those of February 2005. Producers' ending stocks for March 2005 were 183,000 tons.

Import and export data for March 2005 were not available at the time of publication and will be published in the Sulfur in April 2005 Mineral Industry Surveys along with apparent

consumption. Imports of recovered sulfur for February 2005 were estimated to be 250,000 tons; exports were 72,000 tons. Imports of sulfuric acid for February 2005 were 213,000 tons; exports were 28,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

TABLE 1  
SALIENT SULFUR STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2004:					
January-December	7,390 <sup>r</sup>	1,990	9,380 <sup>r</sup>	9,410 <sup>r</sup>	XX
January-March	1,740	495	2,230	2,270	XX
March	607 <sup>r</sup>	176	782 <sup>r</sup>	791 <sup>r</sup>	178 <sup>r</sup>
April	622 <sup>r</sup>	161	784 <sup>r</sup>	782 <sup>r</sup>	178
May	625 <sup>r</sup>	170	795 <sup>r</sup>	789 <sup>r</sup>	186 <sup>r</sup>
June	618 <sup>r</sup>	164	781 <sup>r</sup>	780 <sup>r</sup>	192 <sup>r</sup>
July	650 <sup>r</sup>	173	823 <sup>r</sup>	813 <sup>r</sup>	202 <sup>r</sup>
August	652 <sup>r</sup>	172	824 <sup>r</sup>	838 <sup>r</sup>	189
September	599 <sup>r</sup>	155	754 <sup>r</sup>	757 <sup>r</sup>	186 <sup>r</sup>
October	598 <sup>r</sup>	163	761 <sup>r</sup>	765 <sup>r</sup>	183
November	622 <sup>r</sup>	167	789 <sup>r</sup>	771 <sup>r</sup>	200
December	664 <sup>r</sup>	167	831 <sup>r</sup>	846 <sup>r</sup>	185
2005:					
January	571 <sup>r</sup>	169	740 <sup>r</sup>	740 <sup>r</sup>	179
February <sup>r</sup>	530	156	687	679	187
March <sup>p</sup>	577	164	741	743	183
Total	1,680	489	2,170	2,160	XX

<sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes a small quantity from coking operations.

<sup>3</sup>Subject to inventory adjustments.

TABLE 2  
U.S. IMPORTS OF SULFUR<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries <sup>2</sup>	
	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>
2004:						
January-December	2,010	31,300 <sup>r</sup>	545	28,200 <sup>r</sup>	2,850	76,800 <sup>r</sup>
January-February	340	4,860 <sup>r</sup>	85	5,450	492	13,900 <sup>r</sup>
February	160	3,140 <sup>r</sup>	35	3,050	225	7,980 <sup>r</sup>
March	180	3,640 <sup>r</sup>	25	2,570	225	7,210
April	180	3,060	54	2,550	279	8,040
May	180	2,830	57	2,620 <sup>r</sup>	265	6,880
June	180	2,560	49	2,440	247	5,980
July	160	2,790	54	2,550	251	7,150
August	160	2,050	35	1,780	221	5,290
September	160	2,460	49	2,650 <sup>r</sup>	240	6,850
October	160	1,740	51	2,170	220	4,370
November	150	2,650 <sup>r</sup>	31	1,240	186	5,700
December	160	2,660	55	2,200	226	5,400
2005:						
January	160	2,070 <sup>r</sup>	31	1,070	234	4,730
February	150	2,130 <sup>r</sup>	50	1,930	250	6,080
Total	310	4,200 <sup>r</sup>	81	3,000	484	10,800

<sup>e</sup>Estimated.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3  
U.S. IMPORTS OF SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries <sup>2</sup>		
	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>
2004:									
January-December	1,920	625	72,500	206	66	6,670	2,390	780	86,300
January-February	276	90	11,400	21	7	488	318	106	13,100
February	179	58	7,480	21	7	488	204	69	8,450
March	167	54	6,760	6	2	163	176	58	7,280
April	203	66	7,710	14	5	344	221	72	8,410
May	190	62	7,230	22	7	555	222	72	8,120
June	166	54	6,350	11	3	247	192	63	7,860
July	160	52	5,660	10	3	357	172	56	6,230
August	133	43	4,920	33	11	937	194	63	6,250
September	150	49	5,080	29	9	1,090	206	67	6,480
October	176	57	6,450	19	6	946	215	70	7,480
November	160	52	5,930	11	3	289	218	71	7,500
December	140	46	4,970	30	10	655	251	82	7,610
2005:									
January	173	56	5,990	30	10	840	248	81	9,490
February	174	57	6,190	(4)	(4)	18	213	70	7,820
Total	347	113	12,200	30	10	858	461	151	17,300

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

<sup>4</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF SULFUR AND SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2004:					
January-December	949	63,300	204	66	21,300
January-February	24	3,270	23	7	2,640
February	6	1,530	13	4	1,520
March	102	7,080	14	5	3,190
April	128	7,710	11	4	1,380
May	87	5,190	10	3	2,370
June	36	2,000	26	8	1,610
July	19	1,720	13	4	1,280
August	157	11,500	40	13	3,210
September	107	6,590	11	4	1,090
October	127	7,250	23	7	1,850
November	31	2,280	20	7	1,590
December	130	8,740	13	4	1,120
2005:					
January	22	1,740	13	4	1,590
February	72	5,040	28	9	2,230
Total	94	6,770	41	13	3,820

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5  
U.S. CONSUMPTION OF SULFUR<sup>1</sup>

(Thousand metric tons)

Period	Domestic sources <sup>2</sup>	Imports <sup>e</sup>	Consumption
2004:			
January-December	8,460 <sup>r</sup>	2,850	11,300 <sup>r</sup>
January-February	1,460 <sup>r</sup>	492	1,950 <sup>r</sup>
February	693 <sup>r</sup>	225	918 <sup>r</sup>
March	689 <sup>r</sup>	225	914 <sup>r</sup>
April	654 <sup>r</sup>	279	933 <sup>r</sup>
May	702 <sup>r</sup>	265	967 <sup>r</sup>
June	744 <sup>r</sup>	247	991 <sup>r</sup>
July	794 <sup>r</sup>	251	1,050 <sup>r</sup>
August	681 <sup>r</sup>	221	902 <sup>r</sup>
September	650 <sup>r</sup>	240	890 <sup>r</sup>
October	638 <sup>r</sup>	220	858 <sup>r</sup>
November	740 <sup>r</sup>	186	926 <sup>r</sup>
December	716 <sup>r</sup>	226	942 <sup>r</sup>
2005:			
January	718 <sup>r</sup>	234	954 <sup>r</sup>
February	615	250	865
Total	1,330	484	1,820

<sup>e</sup>Estimated. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Calculated as shipments minus exports.

TABLE 6  
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,  
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT<sup>1</sup>

(Thousand metric tons)

District and source	March 2005 <sup>p</sup>		February 2005		Total 2005 <sup>2</sup>		Year to date 2004 <sup>2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	18	20	21	22 <sup>r</sup>	61	63	60 <sup>r</sup>	61 <sup>r</sup>
Natural gas	2	2	1	2	6	5	6	5 <sup>r</sup>
Total	20	21	22	23 <sup>r</sup>	67	68	66	67 <sup>r</sup>
PAD 2:								
Petroleum and coke	74	74	76	76	236	237	231 <sup>r</sup>	234 <sup>r</sup>
Natural gas	4	3	3	4	10	10	11	12
Total	77	77	79	80	246	247	242 <sup>r</sup>	246 <sup>r</sup>
PAD 3: <sup>3</sup>								
Petroleum and coke	372	364	324	319	1,040	1,030	1,120 <sup>r</sup>	1,140 <sup>r</sup>
Natural gas	42	42	41 <sup>r</sup>	41 <sup>r</sup>	127	130	136 <sup>r</sup>	138 <sup>r</sup>
Total	414	406	365 <sup>r</sup>	360 <sup>r</sup>	1,170	1,160	1,260 <sup>r</sup>	1,280 <sup>r</sup>
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	114	112	109 <sup>r</sup>	105	340	332	326 <sup>r</sup>	333 <sup>r</sup>
Natural gas	116	126	111 <sup>r</sup>	111 <sup>r</sup>	347	359	342 <sup>r</sup>	345 <sup>r</sup>
California	85	83	84	78	257	247	246 <sup>r</sup>	252 <sup>r</sup>
Total	230	238	220 <sup>r</sup>	217 <sup>r</sup>	687	690	668 <sup>r</sup>	678 <sup>r</sup>
Grand total	741	743	687 <sup>r</sup>	679 <sup>r</sup>	2,170	2,160	2,230 <sup>r</sup>	2,270 <sup>r</sup>

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revisions to prior months.

<sup>3</sup>Includes the U.S. Virgin Islands.

<sup>4</sup>Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7  
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS<sup>1</sup>

(Million metric tons per year [annualized basis] and  
dollars per metric ton for period shown)

	2005			2004
	March	February	Total	total
Production	8.72 <sup>p</sup>	8.96 <sup>r</sup>	8.79 <sup>r</sup>	9.38 <sup>r</sup>
Shipments	8.75 <sup>p</sup>	8.96 <sup>r</sup>	8.77 <sup>r</sup>	9.41 <sup>r</sup>
Exports of sulfur	NA	0.94	0.58	0.95
Imports of sulfur:				
Canada	NA	1.96 <sup>e</sup>	1.92 <sup>e</sup>	2.01
Mexico	NA	0.65	0.50	0.55 <sup>r</sup>
Total <sup>2</sup>	NA	3.26 <sup>e</sup>	2.99 <sup>e</sup>	2.85 <sup>e</sup>
Export of H <sub>2</sub> SO <sub>4</sub>	NA	0.37	0.25	0.20 <sup>r</sup>
Import of H <sub>2</sub> SO <sub>4</sub> :				
Canada	NA	2.27	2.15	1.92
Europe	NA	(3)	0.19	0.21
Total <sup>2</sup>	NA	2.78	2.85	2.39
Consumption: <sup>4</sup>				
Domestic sources	NA	8.02	8.25	8.35 <sup>r</sup>
Imports	NA	3.26 <sup>e</sup>	2.99 <sup>e</sup>	2.85 <sup>e</sup>
Total	NA	11.28	11.25	11.21 <sup>r</sup>
Sulfur export values <sup>5</sup>	NA	\$70	\$72	\$67 <sup>r</sup>
Sulfur import values: <sup>5</sup>				
Canada	NA	\$14	\$14	\$16 <sup>r</sup>
Mexico	NA	\$39	\$37	\$52
Average	NA	\$24	\$22	\$27
H <sub>2</sub> SO <sub>4</sub> export values <sup>5</sup>	NA	\$80	\$93	\$105
H <sub>2</sub> SO <sub>4</sub> import values: <sup>5</sup>				
Canada	NA	\$36	\$35	\$38
Europe	NA	\$1,060	\$29	\$32
Average	NA	\$37	\$38	\$36

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes other countries not listed.

<sup>3</sup>Less than 1/2 unit.

<sup>4</sup>Because March trade data were not available, March consumption was not determined.

<sup>5</sup>Average value per ton for most recent data available.